REMARKS

In response to the Office Action of July 26, 2005, applicant asks that all claims be allowed in view of the amendments to the claims and the following remarks. Claims 1-21 are pending, with claims 1, 10, and 15 being independent. Claims 1, 10, 12 15, 16, and 18 are currently amended and claim 21 is newly added. Amendment to the claim 12 finds support at least in the specification at page 14, lines 4-15 and page 15, lines 5-10. Amendment to the claims 1, 10, 15, 16 and 18 find support at least in the specification at page 16, lines 1-27. New claim 21 finds support at least in the specification at page 13, lines 12-15. No new matter has been introduced.

Rejections of Claim 12 under 35 U.S.C. § 112, First Paragraph

Claim 12 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement and written description requirements. The Office Action states that the claimed limitation "running a software algorithm to determine the non-verbal communication" is not supported or adequately described by the specification. Applicant has obviated the rejection by amending claim 12 to recite "running a software analysis process to determine the non-verbal communication." For at least this reason, applicant respectfully requets withdrawal of the rejection of claim 12.

Rejection of Claims 1-6, 8-10, 13, and 14-20 under 35 U.S.C. § 102(b) by Fels

Claims 1-6, 8-10, 13, and 14-20 were rejected under 35 U.S.C. §102(b) as being anticipated by Fels (PCT Application No. WO 98/51078). Applicant has obviated this rejection by amending independent claims 1, 10, and 15.

As amended, independent claim 1 recites a system including an audio-visual input system at a first location that is operable to receive audio-visual information associated with a user. The system also includes a gesture determination system at the first location that is operable to determine gesture information associated with a state of mind of the user based on the received audio-visual information associated with the user. A tele-embodiment unit at a second location is included in the system. The tele-embodiment unit is operable to receive the gesture

information and automatically engage in movement corresponding to the gesture information. The movement of the tele-embodiment unit expresses the state of mind of the user.

Amended independent claim 10 recites similar features related to a conference participant.

Applicant requests reconsideration and withdrawal of the rejection because Fels fails to describe or suggest the subject matter of independent claims 1 or 10. For example, Fels does not describe or suggest a gesture determination system at a first location that is operable to determine gesture information associated with a state of mind of a user based on received audio-visual information associated with a user or a tele-embodiment unit at a second location that is operable to receive the gesture information and automatically engage in movement corresponding to gesture information, whereby the movement of the tele-embodiment unit expresses a state of mind of the user, as recited in amended independent claims 1 and 10.

In general, Fels discloses an apparatus for the projection of a remote conferee's presence into a group meeting environment by using a combination of videoconferencing/teleconferencing and robotics technology. See Fels at abstract. More particularly, Fels discloses a teleconferencing unit at a remote location including a television or video monitor, to display a remote conferee's face (Fels at page 2, lines 15-17). The television unit is placed on a rolling stand (Fels at page 5, lines 19-20). The television, in combination with the rolling stand, can be controlled by a user to move in various ways. For example, the television unit and rolling stand can swivel left or right to create the impression that the remote conferee is turning his or her head to look at a person speaking (Fels at page 2, lines 17-20). In one method described by Fels to control the swivel maneuver, microphones at the remote location pick up sound coming from a person speaking and then control the television and rolling stand to swivel towards the direction of the sound's origin (Fels at page 12, line 28 to page 13, line 16). The television unit and rolling stand also can move up or down to mimic a standing or sitting position (Fels at page 2, lines 21-23), roll around the room (Fels at page 2, lines 23-26), or mimic a bowing motion to be used as a form of greeting (Fels at page 2, lines 26-28). The television and rolling stand combination also has an attention-getting mechanism, such as a raising and waving a mechanical

arm (Fels at page 2, lines 27-32). A remote conferee explicitly controls these movements of the television and rolling stand combination by entering a control via a keyboard, joystick, mouse or other input device (Fels at page 11, lines 12-16).

The Office Action asserts that Fels discloses a method comprising a gesture determination system at a first location to determine gesture information associated with a state of mind of a user. See Office Action of July 26, 2005 at pages 3-4 (citing Fels at page 11, line 8 to page 15, line 25, and page 2, lines 23-28). The Office Action further asserts that Fels discloses a tele-embodiment unit at a second location for receiving gesture information and engaging in movement corresponding to the gesture information, whereby the movement of the tele-embodiment unit expresses the state of mind of the user. See Office Action of July 26, 2005 at pages 3-4 (citing Fels at abstract; page 1, lines 1-15; page 2, line 15 to page 4, line 6; page 9, line 29 to page 10, line 9, etc.). Applicant respectfully disagrees.

In one aspect, Fels discloses a teleconference unit that can turn to face another conference participant at a remote location in response to audio information received from the remote location (e.g., a second location). See Fels at page 12, line 28 to page 13, line 16. For example, if a person at the remote location begins speaking, the teleconference unit of Fels can turn to face the speaker in order to create the impression that the user, being represented at the remote location by the teleconference unit, is giving the user's full attention to the speaker at the remote location. See Fels at page 12, line 28 to page 13, line 16. As such, Fels' teleconference unit engages in movement in response to audio information at the same location where the teleconference unit is located. Moreover, Fels' teleconference unit engages in movement in response to audio information from a participant other than the user. Hence, Fels' teleconference unit does not describe or suggest a gesture determination system at a first location that is operable to determine gesture information associated with a state of mind of a user based on received audio-visual information associated with the user, as recited in amended independent claims 1 and 10. Nor does Fels' teleconference unit describe or suggest a tele-embodiment unit at a second location that is operable to receive the gesture information and automatically engage in movement corresponding to gesture information, whereby the movement of the tele-

embodiment unit expresses the state of mind of the user, also as recited in amended independent claims 1 and 10.

In a second aspect disclosed by Fels, the movements made by the teleconference unit, such as turning to face another conference participant and bowing in greeting, are explicitly controlled by a user. See Fels at page 11, lines 12-16. Hence, this aspect of Fels does not describe or suggest a gesture determination system that is operable to determine gesture information associated with a state of mind of a user based on received audio-visual information associated with a user, as recited in claims 1 and 10. Necessarily, the movements made by the teleconference unit of Fels cannot be made automatically to correspond with gesture information that is determined based on received audio-visual information associated with a user, also as recited in amended independent claims 1 and 10.

Thus, Fels does not describe or suggest a gesture determination system at a first location that is operable to determine gesture information associated with a state of mind of a user based on received audio-visual information associated with a user or a tele-embodiment unit at a second location that is operable to receive the gesture information and automatically engage in movement corresponding to gesture information, whereby the movement of the tele-embodiment unit expresses the state of mind of the user, as recited in amended independent claims 1 and 10.

For at least these reasons, applicant respectfully requests withdrawal of the §102(b) rejections of amended independent claims 1 and 10 and their dependent claims 2-6, 8-9, 13-14, and 16-20.

As amended, independent claim 15 recites a video-conferencing system. The video-conferencing system includes participant input systems corresponding to participants. Each input system is operable to receive audio-visual input from its corresponding participant. The system also includes physical conference units located at a conference location that is remote from a location of each of the participant input systems. Each of the physical conference units corresponds to one of the participants. Each of the physical conference units also include audio-visual output capabilities. The physical conference units convey a physical presence of their

corresponding participants at the conference location based on the received audio-visual inputs from their corresponding participants.

As noted previously, Fels discloses a teleconference unit controllable by a remote conferee by means of a keyboard, joystick, mouse or other input device. See Fels at page 11, lines 12-16. Notably, none of the enumerated devices used to control the teleconference unit include a device capable of receiving audio or visual inputs. As such, Fels discloses controlling a teleconference unit with input devices other than audio-visual inputs from a participant corresponding to the teleconference unit. Fels also discloses a teleconference unit with the ability to turn and face a conference participant who is speaking at the remote location in order to create an impression that the remote conferee is turning his or her head to look at the speaker. See Fels at page 2, line 15-20 and page 12, line 28 to page 13, line 25. As such, Fels' teleconference unit can be controlled by sound other than sound created by the participant corresponding to the teleconference unit. Hence, Fels does not describe or suggest conveying a physical presence of a conference participant based on received audio-visual inputs from a corresponding participant.

Thus, Fels does not describe or suggest physical conference units located at a conference location that is remote from a location of participant input systems, wherein the physical conference units convey a physical presence of each of their corresponding participants at the conference location based on received audio-visual inputs from their corresponding participants, as recited in amended independent claim 15.

For at least these reasons, applicant respectfully requests withdrawal of the §102(b) rejections of amended independent claim 15 and its dependent claims 16-20.

Rejection of Claims 1-6, 8-10, 13, and 14-20 under 35 U.S.C. § 102(b) by Paulos

Claims 1-6, 8-10, and 14-19 were also rejected under 35 U.S.C. §102(b) as being anticipated by Paulos (article entitled "Social Tele-Embodiment: Understanding Presence," copyright 2001). Applicant has obviated this rejection by amending independent claims 1, 10, and 15.

Applicant requests reconsideration and withdrawal of the rejection because Paulos also fails to describe or suggest the subject matter of the independent claims 1 and 10. For example, Paulos does not describe or suggest a gesture determination system at a first location that is operable to determine gesture information associated with a state of mind of a user based on received audio-visual information associated with a user or a tele-embodiment unit at a second location that is operable to receive the gesture information and automatically engage in movement corresponding to gesture information, whereby the movement of the tele-embodiment unit expresses the state of mind of the user, as recited in amended independent claims 1 and 10.

In general, Paulos discloses a mobile tele-robot (called a personal roving presence (PRoP) device) that serves as a physical mobile proxy for a user who is remotely located. See Paulos at page 87, introduction. The mobile tele-robot provides video and audio links from the remote space where a user is located and is controllable over the Internet. See Paulos at page 87, introduction and abstract. More particularly, Paulos' mobile tele-robot enables two-way audio for verbal communication, two-way video to display facial expressions, a mobile robotic base to provide physical positioning of the mobile tele-robot, a movable pan/tilt head to simulate a turn and face movement, and deictic gesturing for simple pointing gestures. See Paulos at page 91, section 5.1. To control Paulos' mobile tele-robot, a user connects to the PRoP device using a standard web browser that invokes a Java applet. See Paulos at page 89, section 3.2. The Java applet is configured to read various input devices, such as a keyboard, mouse, and joystick, and transmit the user-submitted controls to the tele-robot. See Paulos at page 89, section 3.2 More particularly, standard joystick left-right and forward-back controls allow a user to drive the tele-robot, the joystick "hat," or point-of-view, switch directs the head pan-tilt motion of the tele-robot, and the joystick's throttle, or z-axis controller, controls the zooming function of the tele-robot. See Paulos at page 90, section 4.

The Office Action asserts that Paulos discloses a gesture determination system at a first location to determine gesture information associated with a state of mind of the user. See Office Action of July 26, 2005 at page 4 (citing Paulos at page 91). The Office Action further asserts that Paulos discloses a tele-embodiment unit at a second location for receiving gesture

information and engaging in movement corresponding to the gesture information, whereby the movement of the tele-embodiment unit expresses the state of mind of the user. See Office Action of July 26, 2005 at pages 4-5 (citing Paulos at page 89 and "entire publication for other relevant sections not cited by examiner"). Applicant respectfully disagrees.

Paulos discloses a mobile tele-robot that can be moved in response to a user control over the Internet. See Paulos at page 90, section 4, and page 91, section 5.1. The movements made by the tele-robot unit of Paulos must be explicitly controlled by a user via a joystick, or other input device, connected to Paulos' mobile tele-robot via the Internet. See Paulos at page 89, section 4. As such, Paulos does not describe or suggest a gesture determination system that is operable to determine gesture information associated with a state of mind of a user based on received audio-visual information associated with a user, as recited in claims 1 and 10. Necessarily, the movements made by the mobile tele-robot unit of Paulos cannot automatically be made to correspond with gesture information that is determined in response to, and based on, received audio-visual information associated with a user at a first location, also as recited in amended independent claims 1 and 10.

Thus, Paulos does not describe or suggest a gesture determination system at a first location that is operable to determine gesture information associated with a state of mind of a user based on received audio-visual information associated with a user or a tele-embodiment unit at a second location that is operable to receive the gesture information and automatically engage in movement corresponding to gesture information, whereby the movement of the tele-embodiment unit expresses the state of mind of the user, as recited in amended independent claims 1 and 10.

The remote user described by Paulos can explicitly control the mobile tele-robot unit by means of a joystick connected to the mobile tele-robot unit over the Internet. See Paulos at page 89, section 3.2 and page 90, section 4. Hence, Paulos does not describe or suggest conveying a physical presence of a conference participant based on received audio-visual inputs from a corresponding participant.

Thus, Paulos does not describe or suggest physical conference units located at a conference location that is remote from a location of participant input systems, wherein the physical conference units convey a physical presence of each of their corresponding participants at the conference location based on received audio-visual inputs from their corresponding participants, as recited in amended independent claim 15.

For at least these reasons, applicant respectfully requests withdrawal of the §102(b) rejections of amended independent claims 1, 10, and 15, and their dependent claims 2-6, 8-9, 14, and 16-19.

Rejection of Claims 7, 11 and 12 under 35 U.S.C. § 103(a)

Claims 7, 11, and 12, which depend from amended independent claims 1 and 10 were rejected under 35 U.S.C. § 103(a) as being obvious over Fels (PCT Application No. WO 98/51078) in view of Prevost (U.S. Patent No. 6,384,829) and also as being obvious over Paulos (article entitled "Social Tele-Embodiment: Understanding Presence," copyright 2001) in view of Prevost (U.S. Patent No. 6,384,829). Applicant requests reconsideration and withdrawal of the rejection of claims 7, 11, and 12 because, as discussed above, neither Fels nor Paulos describe or suggest the subject matter of amended independent claims 1 and 10 from which claims 7, 11 and 12 depend, respectively.

Prevost describes a system to increase efficiency in message processing and passing to control various types of avatars (e.g., direct user-controlled, scripted, and autonomous animated characters) that represent a user. See Prevost at col. 1, lines 26-32 and 55-64. The avatars are animated, particularly in the case of the directly-controlled characters, based on the movements of human actors, such as a user's gestures, facial expressions, gaze behaviors and body movements. See Prevost at col. 1, lines 26-32 and 55-64. An avatar is a synthetic, animated character that exists only in a virtual environment of a user who controls its behavior. See Prevost at col. 1, lines 25-39. Prevost does not describe or suggest a gesture determination system at a first location that is operable to determine gesture information associated with a state of mind of a user based on received audio-visual information associated with a user or a tele-embodiment unit at a second location that is operable to receive the gesture information and

automatically engage in movement corresponding to gesture information, whereby the movement of the tele-embodiment unit expresses the state of mind of the user, as recited in amended independent claims 1 and 10. Furthermore, Prevost does not describe or suggest physical conference units located at a conference location that is remote from a location of participant input systems, wherein the physical conference units convey a physical presence of each of their corresponding participants at the conference location based on received audio-visual inputs from their corresponding participants, as recited in amended independent claim 15

Thus, Prevost does not cure the failure of Fels, Paulos, or any proper combination of the references to describe or suggest the subject matter of the independent claims. Nor does the Office Action contend Prevost does so. See Office Action of July 26, 2005 at pages 5-6.

For at least this reason, and based on their dependency from amended independent claims 1 and 10, applicant respectfully requests withdrawal of the rejection of claims 7, 11, and 12.

New Claim 21

Claim 21 depends indirectly from independent claim 1. At least for the reason of that dependency and the reasons noted above with respect to independent claim 1, applicant submits that claim 21 is allowable.

Conclusion

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this reply should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Enclosed is a $50.00 check for excess claim fees. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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